

# Compass Activity 1: “Making Simple Compasses”

## Aim:

To make a simple compass by demonstrating that a magnetized piece of metal (a needle) will behave like a compass and indicate the north-south direction.

## What you need:

- Magnet
- Large sewing needle
- Transparent bowl with water in it
- Light thread, for example cotton
- Sheet of plain paper
- Compass
- Small square of very light cardboard

## Instructions:

### Method 1:

Secure the piece of paper to the desk. Use the compass to mark a correct north-south line on the paper about 10cm long, keeping the magnet well away from the compass while you do this.

Now use the magnet to stroke the needle in one direction until it is magnetized (at least 20 strokes). Put the magnet well out of the way when you have finished. Suspend the needle on a length of cotton thread but handle it carefully or you will lose its magnetism. Hold the suspended needle over the piece of paper. The needle should align itself in a north-south position.

### Method 2:

This method demonstrates the very earliest type of compass used.

Repeat the process from method 1 but instead of suspending the needle with thread this time, float it carefully on the square of cardboard on the top of the bowl of water. By placing the bowl on the paper over the north-south line you drew earlier, you should observe that the needle aligns itself in a north-south position.

